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=> d his
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L8

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(FILE 'HOME' ENTERED AT 12:23:38 ON 03 FEB 2005)
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FILE 'HCAPLUS' ENTERED AT 12:24:05 ON 03 FEB 2005

E BHANDARI K/AU

L1 58 E3-8
E SRIVASTAVA S/AU

L2 2243 E3-22
E SRIVASTAVA SHIPRA/AU

L3 1 E3
E NATH C/AU

L4 67 E3-4
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L5 8868 (COUNC? (1A) SCI? (1A) IND? (1A) RES?)/CS.PA L6 32 L1-4 AND ?UREA/BI L7 0 L6 AND ?ARYLOXY?/BI

FILE 'WPIX' ENTERED AT 12:29:11 ON 03 FEB 2005 E BHANDARI K/AU

11 L6 AND PREP+NT/RL

E SRIVASTAVA S/AU
L9 91 E3-10
E NATH C/AU
L10 4 E3

L11 1163 (COUNC? (1A) SCI? (1A) IND? (1A) RES?)/CS.PA

L12 25583 (B10-A13? OR C10-A13? OR E10-A13?)/MC OR (C07C273 OR C07C275)/I

L13 9 L9-11 AND L12

FILE 'REGISTRY' ENTERED AT 12:37:10 ON 03 FEB 2005

FILE 'HCAPLUS' ENTERED AT 12:37:15 ON 03 FEB 2005 L14 TRA L8 1- RN : 245 TERMS

FILE 'REGISTRY' ENTERED AT 12:37:16 ON 03 FEB 2005 L15 245 SEA L14

=> b hcap

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FILE COVERS 1907 - 3 Feb 2005 VOL 142 ISS 6 FILE LAST UPDATED: 2 Feb 2005 (20050202/ED)

This file contains CAS Registry Numbers for easy and accurate

substance identification.

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L8 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
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- AN 2004:561475 HCAPLUS
- DN 141:218306
- ED Entered STN: 14 Jul 2004
- TI Synthesis of tetrahydronaphthyl thioureas as potent appetite suppressants
- AU Bhandari, Kalpana; Srivastava, Shipra; Shankar, Girija
- CS Medicinal and Process Chemistry Division. Central Drug Research Institute. Lucknow. 226001. India
- SO Bioorganic & Medicinal Chemistry (2004), 12(15), 4189-4196 CODEN: BMECEP; ISSN: 0968-0896
- PB Elsevier Ltd.
- DT Journal
- LA English
- CC 1-3 (Pharmacology)
- AB A series of thiourea derivs. (7-23, 25-27) of 1-aminotetrahydronaphthalene (4) and 1-amino-2-hydroxytetrahydronaphthalene (5) were synthesized in single pot in 48-90% yield and evaluated for their anorexigenic activity. Among them compds. 10, 14, 15, 16 and 22 exhibited significant anorexigenic activity without any antidepressant effect and provided a new structural lead for appetite suppressants.
- ST synthesis structure activity anorexic tetrahydronaphthyl thiourea
- IT Appetite depressants

Structure-activity relationship

(synthesis of tetrahydronaphthyl thioureas as potent appetite suppressants)

- IT 16112-96-2 61451-94-3 141034-13-1 745072-14-4
 - RL: PAC (Pharmacological activity); BIOL (Biological study) (synthesis of tetrahydronaphthyl thioureas as potent appetite suppressants)
- IT 2217-40-5 13286-65-2
 - RL: PAC (Pharmacological activity); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
 - (synthesis of tetrahydronaphthyl thioureas as potent appetite suppressants)
- IT 58490-71-4P 141034-11-9P

IT

- RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation);
- RACT (Reactant or reagent)
- (synthesis of tetrahydronaphthyl thioureas as potent appetite suppressants)
 91215-19-9P 377765-08-7P 452969-06-1P 745072-15-5P 745072-16-6P
- 745072-17-7P 745072-18-8P 745072-19-9P 745072-20-2P 745072-21-3P 745072-22-4P 745072-23-5P 745072-24-6P 745072-25-7P 745072-26-8P
 - 745072-27-9P 745072-28-0P 745810-28-0P
 - RL: PAC (Pharmacological activity); SPN (Synthetic preparation):
 - BIOL (Biological study); PREP (Preparation)
 - (synthesis of tetrahydronaphthyl thioureas as potent appetite suppressants)
- IT 62-53-3. Aniline, reactions 64-04-0. 2-Phenylethylamine 92-54-6. Phenylpiperazine 103-67-3. Benzylmethylamine 108-91-8. Cyclohexylamine, reactions 109-07-9. 2-Methylpiperazine 123-75-1.

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Nwaonicha 10/811296 Applicant
                              2252-63-3. 1-[(4-Fluoro)phenyl]piperazine
     Pyrrolidine, reactions
     6321-23-9, 4-Methylcyclohexylamine 6640-24-0, 1-[(3-
     Chloro)phenyl]piperazine 15532-75-9
                                             34803-66-2, 1-(2-
     Pyridyl)piperazine 39593-08-3, 1-[(4-Methyl)phenyl]piperazine
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (synthesis of tetrahydronaphthyl thioureas as potent appetite
        suppressants)
    745072-29-1P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP
     (Preparation); RACT (Reactant or reagent)
        (synthesis of tetrahydronaphthyl thioureas as potent appetite
        suppressants)
    7480-36-6P 745072-30-4P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (synthesis of tetrahydronaphthyl thioureas as potent appetite
        suppressants)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
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- L8 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
- 2003:160091 HCAPLUS ΑN
- DN 139:69333

IT

IT

- Entered STN: 04 Mar 2003 ED
- Molecular adducts of some triphenyltin(IV) 0.0'-alkylene dithiophosphates TI
- Srivastava, S. K.; Pandey, Y. ΑU
- Sch. of Stud. in Chem., Jiwaji Univ., Gwalior. 474 011, India CS
- Journal of the Indian Chemical Society (2003), 80(1), 38-39 S0 CODEN: JICSAH: ISSN: 0019-4522
- PB Indian Chemical Society
- DT Journal
- LA English
- 29-8 (Organometallic and Organometalloidal Compounds)
- CASREACT 139:69333

- AB The interactions of triphenyltin(IV) 0.0'-alkylenedithiophosphates. [(C6H5)3SnS(S)POQO], (Q = -CH2CHMe-, -CH2(CH2)3CH2- and -CMe2CMe2-) with various N. O and S donor Lewis bases have yielded new stable mol. adducts. The results suggest five- and six-coordinated Sn atom in case of unidentate and bidentate Lewis bases, resp.
- ST triphenyltin alkylenedithiophosphate addn nitrogen oxygen sulfur donor Lewis base
- IT Phosphates, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(0.0'-alkylenedithiophosphates: interactions of triphenyltin(IV) alkylene dithiophosphates with various N. O and S donor Lewis bases gave stable mol. adducts containing five- and six-coordinated Sn atoms)

IT Addition reaction

(interactions of triphenyltin(IV) alkylene dithiophosphates with various N. O and S donor Lewis bases gave stable mol. adducts containing five- and six-coordinated Sn atoms)

IT Lewis bases

RL: RCT (Reactant); RACT (Reactant or reagent)
 (interactions of triphenyltin(IV) alkylene dithiophosphates with
 various N. O and S donor Lewis bases gave stable mol. adducts containing
 five- and six-coordinated Sn atoms)

IT Coordination number

(six: interactions of triphenyltin(IV) alkylene dithiophosphates with various N. O and S donor Lewis bases gave stable mol. adducts containing five- and six-coordinated Sn atoms)

IT 60-80-0, Antipyrine 62-56-6, **Thiourea**, reactions 66-71-7. 1.10-Phenanthroline 67-68-5, Dimethyl sulfoxide, reactions 68-12-2, Dimethylformamide, reactions 127-19-5, Dimethylacetamide 137-26-8. Tetramethylthiuramdisulfide 366-18-7, 2.2'-Bipyridyl 791-28-6. Triphenylphosphine oxide 872-50-4, reactions 1073-23-0. 2.6-Lutidine-N-oxide 3878-45-3, Triphenylphosphine sulfide 89202-03-

(interactions of triphenyltin(IV) alkylene dithiophosphates with various N, O and S donor Lewis bases gave stable mol. adducts containing five- and six-coordinated Sn atoms)

551951-27-0P 551951-24-7P 551951-25-8P 551951-26-9P 551951-28-1P IT 551951-31-6P 551951-32-7P 551951-33-8P 551951-29-2P 551951-30-5P 551951-38-3P 551951-34-9P 551951-35-0P 551951-36-1P 551951-37-2P 551951-42-9P 551951-43-0P 551951-39-4P 551951-40-7P 551951-41-8P 551951-45-2P 551951-46-3P 551951-47-4P 551951-48-5P 551951-44-1P 551951-53-2P 551951-49-6P 551951-50-9P 551951-51-0P 551951-52-1P 551951-55-4P 551951-56-5P 551951-57-6P 551951-58-7P 551951-54-3P 551951-59-8P

RL: SPN (Synthetic preparation): PREP (Preparation)

(interactions of triphenyltin(IV) alkylene dithiophosphates with various N. O and S donor Lewis bases gave stable mol. adducts containing five- and six-coordinated Sn atoms)

RE CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- (3) Srivastava. S: J Indian Chem Soc 2001, V78, P254 HCAPLUS
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- (6) Srivastava, T: Indian J Chem Sect A 1983, V22, P128
- (7) Srivastava, T: Indian J Chem Sect A 1983, V22, P810

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(8) Srivastava, T; Indian J Chem Sect A 1987, V26, P267
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L8 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
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AN 2002:603494 HCAPLUS

DN 138:306285

ED Entered STN: 13 Aug 2002

TI Study of the temperature and enthalpy of wax crystallization from middle distillate by DSC

AU Srivastava, S. P.; Butz, T.; Verma, P. S.; Purohit, R. C.; Rahimian, I.

CS Indian Institute of Petroleum, Dehra Dun, 248 005, India

SO Petroleum Science and Technology (2002), 20(7 & 8), 831-839 CODEN: PSTEFV: ISSN: 1091-6466

PB Marcel Dekker, Inc.

DT Journal

LA English.

CC 51-3 (Fossil Fuels, Derivatives, and Related Products)

The temperature and enthalpy of the wax crystallization and of melting were studied in the middle distillate (boiling range: 250-375.degree.) obtained from the indigenous Bombay-High (Off-Shore) crude oil by using a differential scanning calorimeter (DSC). To have better understanding of the gel formation processes the broad distillate fraction was fractionated into five narrow fractions of 25.degree. interval each. From these narrow subfractions the sats. were separated from aroms. by column chromatog., and from sats. the n-paraffins were separated from iso- and cyclo-paraffins by urea adduction, to obtain the n-paraffins concs. (urea adductables)-the wax- and the saturated solvent portion-the UNA. The thermal behavior of narrow subfractions along with their urea adductables and. The solvent portions were studied and the wax appearance temperature (WAT) thus measured was compared with those obtained by optical microscopy and with the ASTM cloud point, wherever possible. To obtain a clearer picture of the solidification process, further study was done by preparing synthetic blends of urea adductables in different concns. in the resp. aromatic and iso- and cyclo-paraffinic solvents (UNA) and studying the thermal behavior of each blend. The variation in WAT with wax concentration as measured by DSC is identical with that measured by optical microscopy and the ASTM cloud point. However, DSC values are lower than microscopic values and higher than ASTM cloud point. The enthalpy of the blends with the same amount of wax in the aromatic and iso- and cyclo-paraffinic solvents indicated that it is higher in the saturated solvent in comparison to aromatic solvent. This confirms the fact that in an aromatic solvent the solubility of the wax is greater, and hence a comparatively lower WAT. The results are further discussed.

ST temp enthalpy wax crystn middle distillate DSC pour point: cloud point crystn paraffin middle distillate alkane fraction

IT Alkanes, preparation

RL: OCU (Occurrence, unclassified): PEP (Physical, engineering or chemical process): PUR (Purification or recovery): PYP (Physical process): OCCU (Occurrence): PREP (Preparation): PROC (Process)

(C10-C26: temperature and enthalpy of wax crystallization from middle distillate fractions by DSC)

IT Petroleum products

(fractions: temperature and enthalpy of wax crystallization from middle distillate fractions by DSC)

IT Petroleum products

(middle distillates, b.p. 250.degree. - 375.degree. cut: temperature and enthalpy of wax crystallization from middle distillate fractions by DSC)

```
Cloud point
    Crystallization
    Crystallization enthalpy
    Crystallization temperature
    Gelation
    Melting point
     Pour point
    Solidification point
        (temperature and enthalpy of wax crystallization from middle distillate fractions by
        DSC)
    Aromatic hydrocarbons, preparation
     RL: OCU (Occurrence, unclassified); PEP (Physical, engineering or chemical
     process); PRP (Properties); PUR (Purification or recovery); PYP
     (Physical process); OCCU (Occurrence); PREP (Preparation); PROC
     (Process)
        (temperature and enthalpy of wax crystallization from middle distillate fractions by
        DSC)
    Paraffin waxes, processes
     RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP
     (Physical process); PROC (Process)
        (temperature and enthalpy of wax crystallization from middle distillate fractions by
        DSC)
    Hydrocarbons, preparation
     RL: PEP (Physical, engineering or chemical process); PUR
     (Purification or recovery); PYP (Physical process); PREP
     (Preparation): PROC (Process)
        (temperature and enthalpy of wax crystallization from middle distillate fractions by
        DSC)
    Cycloalkanes
IT
     Isoalkanes
     RL: OCU (Occurrence, unclassified); PUR (Purification or recovery)
     ; RCT (Reactant); REM (Removal or disposal); OCCU (Occurrence); PREP
     (Preparation); PROC (Process); RACT (Reactant or reagent)
        (urea adduction; temperature and enthalpy of wax crystallization from
        middle distillate fractions by DSC)
    57-13-6. Urea. processes
     RL: CPS (Chemical process); PEP (Physical, engineering or chemical
     process); PROC (Process)
        (temperature and enthalpy of wax crystallization from middle distillate fractions by
       DSC)
              THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 10
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   ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
1.8
    2001:712305 HCAPLUS
AN
DN
     136:37696
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Entered STN: 28 Sep 2001

ED

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Reactivity of phenylmercury-0.0'-alkylenedithiophosphate
    Srivastava, S. K.; Saxena, S. B.; Jain, S.
AU
CS
    School of Studies in Chemistry, Jiwaji University, Gwalior, 474 011. India
    Journal of the Indian Chemical Society (2001), 78(7), 362-363
     CODEN: JICSAH; ISSN: 0019-4522
PB
     Indian Chemical Society
DT
    Journal
LA
    English
    29-9 (Organometallic and Organometalloidal Compounds)
CC
0$
    CASREACT 136:37696
    The reactions of phenylmercury 0.0'-alkylenedithiophosphate [cyclic]
     [C6H5HgS(S)POCH2(CH2)3CH20] with various O- and S- donor Lewis bases L (L
     = DMSO, DMF, 2,6-lutidine N-oxide, 1-methyl-2-pyrrolidinone,
     triphenylphosphine oxide, dimethylacetamide, antipyrine, thiourea
     . triphenylphosphine sulfide, tetramethylthiuram disulfide) have yielded
     some new 1:1 [C6H5HgS(S)POCH2(CH2)3CH2O].cntdot.L mol. adducts. According
     to anal. and spectral studies, the L is coordinated to the Hg atom. which
     is 3-coordinate.
    alkylenedithiophosphate phenylmercury Lewis base adduct prepn
ST
    Lewis bases
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reactions of phenylmercury alkylenedithiophosphate with Lewis bases)
     60-80-0 62-56-6, Thiourea, reactions 127-19-5 137-26-8
     791-28-6 872-50-4, reactions 1073-23-0
                                                  3878-45-3
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (coordination reaction with alkylenedithiophosphate with Lewis bases)
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (coordination reaction with oxygen and sulfur donor ligands)
                                  380496-16-2P
                                                  380496-17-3P
                                                                 380496-18-4P
ΙT
     380496-14-0P
                    380496-15-1P
                                                  380496-22-0P
                                                                 380496-23-1P
     380496-19-5P
                    380496-20-8P
                                   380496-21-9P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (reactions of phenylmercury alkylenedithiophosphate with Lewis bases)
             THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Basin, C; Inorg Chim Acta 1983, V77, PL131
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(3) Contreas, G; J Inorg Nucl Chem Lett 1970, V6, P225
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    ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
L8
ΑN
    2001:302854 HCAPLUS
DN
    135:61407
    Entered STN: 29 Apr 2001
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Molecular adducts of some phenylmercury(II)0,0'-alkylene dithiophosphates

Srivastava, S. K.; Saxena, S. B.; Jain, S.

TI

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School of Studies in Chemistry, Jiwaji University, Gwalior, 474 011, India
CS
    Indian Journal of Chemistry, Section A: Inorganic, Bio-inorganic,
     Physical, Theoretical & Analytical Chemistry (2001), 40A(4), 380-382
    CODEN: ICACEC; ISSN: 0376-4710
PB
    National Institute of Science Communication, CSIR
DT
    Journal
LA
    English
    29-9 (Organometallic and Organometalloidal Compounds)
CC
    The interactions of phenylmercury 0.0'-alkylene dithiophosphates.
     [C6H5HgS(S)POGO] (G = -CH2C(H)-CH3 and C(CH3)2(CH3)2C-) with various 0-
     and S- donor Lewis bases (e.g., DMSO, DMF, 2.6-lutidine N-oxide,
     1-methyl-2-pyrrolidinone, triphenylphosphine oxide, dimethylacetamide.
     antipyrine, thiourea, triphenylphosphine sulfide and tetra-Me
     thiuramdisulfide) yielded new mol. adducts. The elemental analyses and
     spectral (IR and 1H NMR) data suggest the presence of three - coordinated
     mercury atom.
     phenylmercury alkylene dithiophosphate Lewis base adduct prepn
ST
IT
    Lewis bases
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (complexes, mercury; preparation of phenylmercury alkylene dithiophosphate
        Lewis base adducts)
IT
    Lewis bases
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of phenylmercury alkylene dithiophosphate Lewis base adducts)
    Coordination number
IT
        (three: in phenylmercury alkylene dithiophosphate Lewis base adducts)
     60-80-0, Antipyrine 62-56-6, Thiourea, reactions 67-68-5,
IT
     Dimethyl sulfoxide, reactions 68-12-2, Dimethylformamide, reactions
     127-19-5. Dimethylacetamide 137-26-8. Tetramethyl thiuramdisulphide
     791-28-6, Triphenylphosphine oxide 872-50-4, 1-Methyl-2-pyrrolidinone.
     reactions 1073-23-0, 2.6-Lutidine N-oxide 3878-45-3. Triphenyl
     phosphine sulfide 154923-00-9
                                      215809-51-1
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (mol. adduct formation between phenylmercury alkylene dithiophosphates
        and Lewis bases)
                                                  345653-98-7P
                                                                 345653-99-8P
                    345653-96-5P
                                   345653-97-6P
IT
     345653-95-4P
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     345654-00-4P
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                                   345654-12-8P
                                                  345654-13-9P
     345654-10-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
              THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 12
RF
(1) Bhasin, C; Inorg chim Acta 1983, V77, PL31
(2) Bhasin, C; Inorg chim Acta 1988, V144, P157 HCAPLUS
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- (7) Patil, S; J chem Soc A 1967, P1187
- (8) Srivastava, S: Indian J Chem 1981. V20. P443
- (9) Srivastava, S; Synth React inorg met-org Chem 1998, V28, P1431 HCAPLUS
- (10) Srivastava, T: Indian J Chem 1983, V22A, P128 HCAPLUS
- (11) Srivastava, T: Indian J Chem 1983, V22A, P344 HCAPLUS
- (12) Srivastava. T: Indian J Chem 1983, V22A, P810 HCAPLUS
- ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN

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1991:583507 HCAPLUS
    115:183507
DN
    Entered STN: 01 Nov 1991
    Reactions of (.eta.-methylcyclopentadienyl)manganese tricarbonyl with
ΤI
     primary amines
ΑU
     Srivastava, S. C.; Shrimal, A. K.; Srivastava, Amar
    Dep. Chem., Univ. Gorakhpur, Gorakhpur, India
CS
    Journal of Organometallic Chemistry (1991). 414(1). 65-9
    CODEN: JORCAI; ISSN: 0022-328X
DT
    Journal
LA
    English
    29-11 (Organometallic and Organometalloidal Compounds)
CC
     Section cross-reference(s): 23
    CASREACT 115:183507
0S
    (.eta.-CH3C5H4)Mn(CO)3 reacts with RNH2 (R = n-C4H9, sec-C4H9, n-C5H11.
AB
     n-C6H13, cyclo-C6H11, n-C7H15, n-C8H17, n-C9H19, C6H5CH2) to give
     corresponding sym-dialkylureas when a 1:2 M mixture of the two reactants is
     irradiated with UV light for 100-250 h. The complexes
     (.eta.-CH3C5H4)Mn(CO)2(CONHR)(H) were isolated for R = n-C4H9, n-C6H13,
     and cyclo-C5H11.
     urea dialkyl; carbonylation amine manganese tricarbonyl
    Amines, reactions
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (photochem. carbonylation of, by (methylcyclopentadienyl)manganese
        tricarbonyl, dialkylureas from)
IT
     Carbonylation
        (photochem., of primary amines by (methylcyclopentadienyl)manganese
        tricarbonyl, dialkylureas from)
ΙT
    12108-13-3
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (carbonylation by, of primary amines, photochem.)
     100-46-9, Benzylamine, reactions 108-91-8, Cyclohexylamine, reactions
     109-73-9, Butylamine, reactions 110-58-7, Pentylamine 111-26-2.
     Hexylamine 111-68-2, Heptylamine 111-86-4, Octylamine 112-20-9,
     Nonylamine 13952-84-6, 2-Butanamine
     RL: RCT (Reactant): RACT (Reactant or reagent)
        (carbonylation of. by (methylcyclopentadienyl)manganese tricarbonyl)
     869-79-4P 1466-67-7P 1792-17-2P 1798-20-5P 1943-08-4P 2078-76-4P
IT
                 2763-88-4P 94381-33-6P 136638-43-2P 136638-44-3P
     2387-23-7P
     136638-45-4P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
    ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
L8
    1984:195055 HCAPLUS
ΑN
DN
    100:195055
    Entered STN: 08 Jun 1984
ED
     Preparation of molybdenum trisulfide by solid state chemical reactions
ΤI
    Srivastava, S. K.; Avasthi, B. N.; Basu, S.
ΑU
     Dep. Chem., Indian Inst. Technol., Kharagpur. 721302, India
CS
    Journal of Materials Science Letters (1984), 3(4), 313-14
S0
     CODEN: JMSLD5: ISSN: 0261-8028
DT
    Journal
LA
    English
    52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
CC
     Section cross-reference(s): 49
     Preparation of MoS3 (for battery cathodes and MoS2 manufacture) by the solid-state
```

chemical reaction of MoO3 and **thiourea**, and characterization of the prepared MoS3 by chemical anal., x-ray study, thermogravimetric anal., magnetic susceptibility. IR spectra, etc. are reported.

ST molybdenum sulfide manuf battery cathode

IT Cathodes

(battery, molybdenum trisulfide for, preparation of)

IT 12033-29-3P

RL: PREP (Preparation)

(preparation of. by solid-state chemical reactions)

- L8 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
- AN 1984:156565 HCAPLUS
- DN 100:156565
- ED Entered STN: 12 May 1984
- TI Substituted thiobarbituric acids as anti-Parkinsonian agents
- AU Kumar, P.; Nath, C.; Agarwal, Jagdish C.; Bhargava, K. P.; Shanker, K.
- CS Dep. Pharmacol. Ther., King George's Med. Coll., Lucknow, 226 003, India
- SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1983), 22B(9), 955-8 CODEN: IJSBDB; ISSN: 0376-4699
- DT Journal
- LA English
- CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 1
- OS CASREACT 100:156565

GΙ

- AB R(CH2)nNHCSNHPh (R = 2.4-Cl2C6H3, 3.5-Cl2C6H3, n = 0; R = 2.4-Cl2C6H3, 2.4-Me2C6H3, n = 1), prepared by the condensation of R(CH2)nNH2 with PhNCS, on cyclization with CH2(C02H)2 in the presence of AcCl give the thiobarbituric acids I (X = H2), which are converted into I [X = CHR1, R1 = 4-Me0C6H4, 3.4-(Me0)2C6H3, 2-H0C6H4, 3-FC6H4, 3.4-Me0(H0)C6H3, 3.4-Cl2C6H3] and II (X1 = 0.CH2, CH2CH2, NC6H4Cl-3) by Knoevenagel and Mannich reactions resp. Some of the compds. show significant anti-Parkinsonian activity with a high safety margin.
- ST thiobarbiturate arylidene aminomethyl prepn Parkinsonism: arylidenethiobarbiturate prepn Parkinsonism: aminomethylthiobarbiturate prepn Parkinsonism
- IT Parkinsonism

(inhibitor, arylidenethiobarbiturate and aminomethylthiobarbiturate)

IT 110-89-4, reactions 110-91-8, reactions 111-49-9 6640-24-0

RL: RCT (Reactant); RACT (Reactant or reagent) (aminomethylation of thiobarbiturate with)

89516-52-9P 89516-53-0P 89516-56-3P IT 89516-54-1P 89516-55-2P 89516-59-6P 89516-60-9P 89516-61-0P 89516-57-4P 89516-58-5P 89516-66-5P 89516-64-3P 89516-65-4P 89516-62-1P 89516-63-2P 89516-71-2P 89516-70-1P 89516-67-6P 89516-68-7P 89516-69-8P

```
RL: SPN (Synthetic preparation): PREP (Preparation)
        (preparation and anti-Parkinsonism activity of)
IT
     89516-48-3P
                  89516-49-4P
                                89516-50-7P 89516-51-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP
     (Preparation); RACT (Reactant or reagent)
        (preparation and reaction of, with aromatic aldehyde or formaldehyde and amine)
                  62644-21-7P 89516-46-1P 89516-47-2P
    13528-25-1P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP
     (Preparation); RACT (Reactant or reagent)
        (preparation and reaction of, with malonic acid)
     103-72-0
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with aromatic amines)
    141-82-2. reactions
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with arylthiourea)
     94-98-4 95-00-1 554-00-7 626-43-7
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with pheny isothiocyanate)
    90-02-8. reactions 120-14-9 121-33-5 123-11-5. reactions 456-48-4
ΙT
     6287-38-3
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with thiobarbiturate)
    ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
L8
    1976:150733 HCAPLUS
AN
    84:150733
DN
    Entered STN: 12 May 1984
ΤI
    Reactions of aryl- and diarylthioureas with some molybdenum carbonyl
     derivatives
ΑU
    Tripathi, S. C.; Srivastava, S. C.; Pandey, R. D.; Mani, R. P.
    Dep. Chem., Univ. Gorakhpur, Gorakhpur, India
    Journal of Organometallic Chemistry (1976), 110(1), 67-71
     CODEN: JORCAI: ISSN: 0022-328X
DT
    Journal
    English
LA
     29-11 (Organometallic and Organometalloidal Compounds)
    Cycloheptatrienemolybdenum tricarbonyl reacted with ligands (L) (L =
     phenyl-, o-tolyl-, m-tolyl-, p-tolyl-, .alpha.-naphthyl-,
     .beta.-naphthyl-, sym-diphenyl-, sym-di-o-tolyl-, sym-di-p-tolyl- or
     sym-di-.alpha.-naphthyl-thiourea) to give Mo(CO)5L derivs.
     rather than the expected products, cis-Mo(CO)3L3. Evidence was obtained
     for the formation of trans-Mo(CO)4L2 derivs. when L = sym-diphenyl- and
     sym-di-o-tolyl-thiourea. These donors (L) on reaction with
     Mo(CO)4B(B = o-phenanthroline or 2.2'-bipyridine) yielded mixed ligand
     derivs. Mo(CO)3BL. The appearance of three C-O stretching bands in
     agreement with the Cs symmetry of mixed-ligand molybdenum carbonyls.
    molybdenum thiourea carbonyl complex; phenanthroline
     thiourea molybdenum complex; bipyridine thiourea
     molybdenum complex
IT
    Carbonyls
     RL: RCT (Reactant): RACT (Reactant or reagent)
        (molybdenum, thiourea complexes)
                  59244-68-7P
                                59244-69-8P
                                              59244-70-1P
                                                             59244-71-2P
IT
     40419-06-5P
                                              59244-75-6P
                                                             59244-76-7P
     59244-72-3P
                  59244-73-4P
                                59244-74-5P
     59244-77-8P
                  59244-78-9P
                                59244-79-0P
                                              59244-80-3P
                                                            59244-81-4P
                  59244-83-6P
                               59527-11-6P
     59244-82-5P
```

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RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
    15668-64-1
ΙT
     RL: RCT (Reactant): RACT (Reactant or reagent)
        (reaction of, with phenylthiourea)
     RL: RCT (Reactant): RACT (Reactant or reagent)
        (reaction of, with thiourea derivs.)
    ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
L8
AN
    1973:91955 HCAPLUS
DN
    78:91955
ED
    Entered STN: 12 May 1984
    Aryl- and diarylthioureamolybdenum carbonyls
ΤI
    Tripathi, S. C.; Srivastava, S. C.; Pandey, R. D.
     Dep. Chem., Univ. Gorakhpur, Gorakhpur, India
CS
    Journal of Inorganic and Nuclear Chemistry (1973), 35(2). 457-63
     CODEN: JINCAO: ISSN: 0022-1902
DT
    Journal
    English
    78-7 (Inorganic Chemicals and Reactions)
     Section cross-reference(s): 73
    Ten aryl- and diarylthioureamolybdenum pentacarbonyls and 9 mixed derivs.
     [.pi.-C5H5Mo(C0)2L]2 (L = aryl or diarylthiourea) were
     synthesized. Bonding properties of these thioureas were interpreted by
     measurement of the ir spectra of synthesized substituted Mo carbonyls.
     The ir spectra of arylthioureamolybdenum pentacarbonyls had an addnl. C-O
     band in the low frequency side of the strongest peak. This addnl. C-O
     band was attributed to the lifting of the degeneracy of the E mode due to
     the unsym. structures of the arylthioureas. Two C-O bands observed in
     [.pi.-C5H5Mo(CO)2L]2 derivs. were attributed to modes (Au + Bu).
    molybdenum arylthiourea carbonyl complex; thiourea
     aryl complex molybdenum; urea thio complex molybdenum; IR
     molybdenum arylthiourea carbonyl
IT
    Carbonyls
     RL: RCT (Reactant): RACT (Reactant or reagent)
        (molybdenum)
IT
    Force constant
     Infrared spectra
        (of molybdenum arylthiourea carbonyls)
                                                             39385-46-1P
                   39385-35-8P
                                39385-36-9P
                                              39385-45-0P
     39385-34-7P
                                39385-50-7P
                                                             40419-03-2P
     39385-47-2P
                   39385-48-3P
                                              40419-02-1P
                   40419-05-4P
     40419-04-3P
                                40419-06-5P
                                              40419-07-6P
                                                             40419-08-7P
                   40419-10-1P
                                40530-62-9P
                                              41482-09-1P
     40419-09-8P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
    12091-64-4 13939-06-5
IT
     RL: RCT (Reactant): RACT (Reactant or reagent)
        (reaction of, with arylthioureas)
    ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
L8
    1969:449887 HCAPLUS
ΑN
DN
    71:49887
ED
    Entered STN: 12 May 1984
TI
    Thiopegan derivatives. XXXV. Reaction between 6-aminopiperonal, and
     allyl isothiocyanate
    Singh, Harjit; Singh, Ishwar: Bhandari, K. S.; Dhami, K. S.;
```

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Arora, S. S.; Narang, K. S.
    Panjab Univ., Chandigarh, India
    Journal of the Indian Chemical Society (1969), 46(4), 367-70
     CODEN: JICSAH: ISSN: 0019-4522
DT
    Journal
LA
    English
CC
IT 23126-53-6P
                   23126-54-7P
                   23126-59-2P
     23126-58-1P
     23192-28-1P
        (preparation of)
IT
    57-06-7
```

28 (Heterocyclic Compounds (More Than One Hetero Atom))

Condensation of 6-aminopiperonal and allyl isothiocyanate furnished N-(2-formyl-4,5-methylenedioxyphenyl)-N-allyl thiourea which was cyclized to give 2-methyl-4-chloro-6.7-methylenedioxy-10.11-thiopega-9-ene hydrochloride and 2-bromomethyl-4-bromo-6.7-methylenedioxy-10.11-thiopega-9-ene by treatment with dry HCl gas and Br, resp. These products were condensed with some amines to introduce basic side chains at position 4.

thiazologuinazolines; quinazolines thiazolo; thiopegan derivs

23126-55-8P 23126-56-9P 23126-57-0P 23126-65-0P 23126-66-1P 23126-67-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with aminopiperonal)

23126-68-3

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with isothiocyanic acid allyl ester)

=> b woix FILE 'WPIX' ENTERED AT 12:37:37 ON 03 FEB 2005 COPYRIGHT (C) 2005 THE THOMSON CORPORATION

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- >>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER GUIDES. PLEASE VISIT: http://thomsonderwent.com/support/userguides/ <<<
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- >>> SMILES and ISOSMILES strings are no longer available as Derwent Chemistry Resource display fields <<<

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>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
    PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/
    FOR DETAILS. <<<
=> d all 113 tot
L13 ANSWER 1 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
     2004-213940 [20] WPIX
    2003-491702 [46]; 2003-851738 [79]
CR
DNC C2004-084705
    Preparation of pertinacious alkaline protease inhibitor useful as
     bio-control agent, involves the use of Streptomyces specie in fermentation
     medium containing assimilable carbon and nitrogen sources at specified
     conditions.
DC
     B04 C06 D16
    DESHPANDE, V V: GHATGE, M S: RAO, M B: VERNEKAR, J V
IN
    (COUL) COUNCIL SCI & IND RES CSIR
PA
CYC 1
PI US 2004038342 A1 20040226 (200420)*
                                                5
                                                      C12N009-99
ADT US 2004038342 A1 Div ex US 2000-527602 20000317, US 2003-356576 20030203
FDT US 2004038342 Al Div ex US 6514748
                          19990319
PRAI IN 1999-DE442
   ICM C12N009-99
IC
     ICS C12N001-21
     US2004038342 A UPAB: 20040324
     NOVELTY - Preparing a pertinacious alkaline protease inhibitor comprising
     growing Streptomyces specie in a fermentation medium containing
     assimilable carbon and nitrogen sources at 28-30 deg. C for at least 96
     hours, separating the solids by conventional methods to obtain a cell free
     liquid, and recovering a protease inhibitor by a precipitation method from
     the cell free liquid using salting out agent, is new.
          ACTIVITY - Antifungal.
          No biological data given.
          MECHANISM OF ACTION - Pertinacious Alkaline Protease Inhibitor.
          USE - The protrin inhibitor is useful as a bio-control agent or
     biodegradable antifungal agent (claimed).
          ADVANTAGE - The invention provides an attractive and economical
     process for rapid and convenient production of protease inhibitor of
     microbial origin. It is easier to manipulate the microbial protease
     inhibitor than those from plants or animals sources. The alkaline protease
     inhibitor is biodegradable and environmentally friendly antifungal agent
     against toxic chemical fungicides used currently. It is stable over a pH
     of 6-12 and at 40-95 deg. C.
     Dwg.0/0
FS
     CPI
FA
     AB: DCN
     CPI: B04-A08C2: B04-A10: B04-C02B: B04-F10B5: B04-N02: B05-A01A; B05-A01B;
          B05-A03A: B05-B02A3: B05-C01: B05-C02: B05-C04: B05-C05; B05-C07:
          B07-A02A; B07-A02B; B10-A07; B10-A13C; B10-E04C; B11-B;
          B14-A04; B14-D07C; C04-A08C2; C04-A10; C04-C02B; C04-F10B5; C04-N02;
          CO5-AO1A; CO5-AO1B; CO5-AO3A; CO5-BO2A3; CO5-CO1; CO5-CO2; CO5-CO4;
          C05-C05: C05-C07: C07-A02A: C07-A02B: C10-A07: C10-A13C:
          C10-E04C: C11-B: C14-A04: C14-D07C: D05-C
L13 ANSWER 2 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2003-420291 [39] WPIX
```

DNC C2003-110706

- TI Preparation of thiourea used for amino resin manufacture, involves passing carbon dioxide to mixture of carbon dioxide-hydrogen sulfide, adding calcium cyanamide, and passing carbon dioxide to decompose calcium compound.
- DC E35
- IN MORESHWAR, C G: MURTHY, B R K; PARSHURAM, K M; SHIVRAM, M S; SRINIVASA. B; YESHWANT. G M
- PA (MORE-I) MORESHWAR C G; (MURT-I) MURTHY B R K; (PARS-I) PARSHURAM K M; (SHIV-I) SHIVRAM M S; (SRIN-I) SRINIVASA B; (YESH-I) YESHWANT G M; (COUL) COUNCIL SCI & IND RES

CYC 1

- PI US 2003060662 A1 20030327 (200339)* 5 C07C335-00 US 6657082 B2 20031202 (200379) C07C335-02
- ADT US 2003060662 A1 US 1998-46740 19980324; US 6657082 B2 US 1998-46740 19980324

PRAI US 1998-46740 19980324

- IC ICM C07C335-00; C07C335-02
- AB US2003060662 A UPAB: 20030619

NOVELTY - Improved process for the preparation of thiourea comprises passing a mixture of carbon dioxide and hydrogen sulfide into a slurry formed by addition of calcium cyanamide into water, separating the thiourea solution, treating with activated carbon, removing the carbon, separating the product and drying the product at a temperature between 50 to 70 deg. C to obtain the product.

DETAILED DESCRIPTION - An improved process for the preparation of thiourea which comprises passing a mixture of carbon dioxide and hydrogen sulfide into a slurry formed by addition of calcium cyanamide into water under constant stirring, maintaining alkaline pH at a temperature ranging between ambient to 80 deg. C. stopping the addition of hydrogen sulfide, continuing the slow passing of carbon dioxide and addition of remaining part of calcium cyanamide charge and retaining reaction mass to complete the secondary reactions to form the product for a period ranging from 2 to 5 hours and continuing passing of carbon dioxide at an increased rate for effecting decomposition of Ca(SH)2 for a period of 1.6 to 6 hours, stopping the addition of carbon dioxide, separating the thiourea solution, treating the separated solution with activated carbon, removing the carbon, separating the product formed and drying the product at a temperature between 50 to 70 deg. C to obtain the product.

USE - For preparing thiourea used for manufacturing amino resins. herbicides, fungicides, insecticides, plant growth regulators and photographic papers, and for electrochemical processes, pharmaceutical industries, textile processing, hydrometallurgy, rubber industry and petroleum industry.

ADVANTAGE - High purity thiourea is produced in a high yield, by the improved process.

Dwg.0/0

- FS CPI
- FA AB; DCN
- MC CPI: **E10-A13A1**; E11-F09
- L13 ANSWER 3 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
- AN 2003-267864 [26] WPIX
- DNN N2003-213028 DNC C2003-069743
- TI Process for isolation of p-benzosemiquinone, for measuring toxicity of cigarette, involves collecting tar or cigarette smoke solution, extracting using methylene chloride, water saturated n-butanol and purifying.

```
DC
    D18 E14 J04 P15 S03
    CHATTERJEE, I B
ΙN
    (COUL) COUNCIL SCI & IND RES
PA
CYC 101
    WO 2003000633 A2 20030103 (200326)* EN 83
                                                     C07C037-00
PΙ
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TR TZ UG ZM ZW
        W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
            KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
            RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM
           ZW
                    A1 20030619 (200341)
                                                     A24F001-00
     US 2003111087
                    A2 20040331 (200424) EN
                                                     G01N031-00
     EP 1402253
        R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
            RO SE SI TR
     KR 2004019316 A 20040305 (200444)
                                                     C07C037-00
                                                     G01N033-497
     US 6782891
                    B2 20040831 (200457)
     AU 2002232115 A1 20030108 (200460)
                                                     C07C037-00
                                                     C07C037-68
     US 2004204617 A1 20041014 (200468)
ADT WO 2003000633 A2 WO 2002-IN19 20020131; US 2003111087 A1 US 2002-76033
     20020213: EP 1402253 A2 EP 2002-712239 20020131, WO 2002-IN19 20020131: KR
     2004019316 A KR 2003-716754 20031222; US 6782891 B2 US 2002-76033
     20020213: AU 2002232115 A1 AU 2002-232115 20020131: US 2004204617 A1 Div
     ex US 2002-76033 20020213, US 2004-754025 20040108
FDT EP 1402253 A2 Based on WO 2003000633; AU 2002232115 A1 Based on WO
     2003000633
PRAI IN 2001-DE701
                          20010622
   ICM A24F001-00: C07C037-00; C07C037-68: G01N031-00; G01N033-497
     ICS A24F001-10
    W02003000633 A UPAB: 20031030
```

NOVELTY - Process for isolation of p-benzosemiquinone involves collecting tar or cigarette smoke solution, extracting with potassium phosphate buffer, methylene chloride and water saturated n-butanol, subjecting to thin layer chromatography using silica plates which are developed, identifying location of band corresponding to Rf 0.26, extracting with acetone and water saturated n-butanol, and drying.

DETAILED DESCRIPTION - A tar or cigarette smoke solution is collected from lighted conventional filtered tipped cigarettes. The tar is collected by lighting the cigarettes having a tar content of 20-30 mg/cigarette in a glass flask dipped in a mixture of ice and salt. The tar is allowed to condense and settle at the bottom of the flask. The flask is kept at room temperature and the tar is extracted using 30-60 mM potassium phosphate buffer at a pH of 7.4-7.8.

The resulting solution is filtered through 0.45 micro m Millipore filter and the pH of the filtrate is adjusted to 7.4-7.6 by adding sodium hydroxide solution. The tar solution is extracted thrice with equal volume of methylene chloride. The lower methylene chloride layer is discarded and the upper yellow colored aqueous layer termed as aqueous extract of cigarette smoke is collected. The aqueous extract is extracted twice with equal volume of water saturated n-butanol. The cooled yellow butanol extract is lyophilized in a lyophilizer at -50 deg. C to -60 deg. C under vacuum.

The lyophilized material is extracted twice with high performance liquid chromatography (HPLC) grade acetone. The acetone solution is dried under vacuum, and the acetone extract is dissolved with HPLC grade methanol. The methanol solution is subjected to band thin layer

chromatography using non-fluorescent silica plates.

The plates are developed using a mixture of toluene and ethylacetate in a ratio of 80:20. The plate is taken out and dried at 25-30 deg. C using a drier. Small strips containing the developed material is cut from both sides of the plates, and are kept in an iodine chamber for the location of band corresponding to Rf 0.26. The band is scrapped and extracted with HPLC grade acetone. The acetone layer is collected and dried under vacuum. The acetone extract which appeared as pale yellow needles is dissolved by adding equal volume of milli Q water.

The resultant aqueous solution is extracted with equal volume of HPLC grade water saturated n-butanol. The upper n-butanol layer is dried in small glass tubes under vacuum to obtain the major cigarette smoke (cs) oxidant with a purity of 98-99% and yield of 18-22 micro g/cigarette. The (cs) oxidant is purified by dissolving a mobile solvent comprising a mixture of methylene chloride and methanol in a volume ratio of 90:50.

The resulting solution is injected in a HPLC instrument with a normal phase 20 cm silica column using an ultraviolet detector at 294 nm at a flow rate of 0.5 ml/minute, and at 25 deg. C and 29 kgf/cm2. The effluent which appears as a single peak at a retention time of 8.80 minute is collected with a purity of 100% and yield of 8.4% of the total cs oxidant present in parent tar solution. The (cs) oxidant is p-benzosemiquinone which is responsible for the oxidative damage of proteins and deoxynucleic acid (DNA).

INDEPENDENT CLAIMS are also included for:

- (1) a process for quantitative determination of p-benzosemiquinone;
- (2) a method for prevention of cigarette smoke induced protein oxidation in vitro;
- (3) use of chemical compounds or agents selected from ascorbic acid. sodium dithionite. tartaric acid. citric acid. oxalic acid. succinic acid. histidine. lysine. thiourea. glutathione. black tea extract. green tea extract. catechin, epigallocatechin and epicatechin. as antidote for the harmful effect caused by the cigarette smoke oxidant:
 - (4) use of p-benzosemiquinone compound; and
 - (5) method for quantitative estimation of p-benzosemiquinone.
- USE For isolating p-benzosemiquinone for studying mechanism of oxidative damage-induced degenerative diseases caused by cigarette smoke reducing oxidative damage to isolated protein. DNA, culture cell or to an experimental model under laboratory conditions, and for formulating the quantity and nature of smoking material to be used in cigarette, cigar, cigarette pipes and other conventional smoking devices.

ADVANTAGE - p-Benzosemiquinone which is a harmful oxidant from cigarette is isolated with high purity and high yield.

DESCRIPTION OF DRAWING(S) - The figure shows the high performance liquid chromatography of the butanol extract after thin layer chromatography.

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Dwg.3/35
```

FS CPI EPI GMPI

FA AB; GI; DCN

MC CPI: D07-C; D07-D; E06-A01; E07-A02B; E07-D09B; E10-A01: **E10-A13A2**; E10-B01C1; E10-C02D1; E10-C02D2; E10-C02F; E10-E04L3; E10-F02C;
E10-H04C4; E11-Q01; E11-Q03C; E31-F04; E31-K05D; J04-B01C
EPI: S03-E09C3; S03-E09C5; S03-E13D; S03-E14A

L13 ANSWER 4 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-163234 [21] WPIX

DNC C2002-050358

TI New composition for a slow release nitrogenous fertilizer e.g. urea

```
comprises an inert material and an essential oil or its derivatives.
DC
    AGARWAL, K K; ANWAR, M; KHANUJA, S P S; KIRAN, U; KUMAR, S; PATRA, D D;
     SINGH. A
PA (COUL) COUNCIL SCI & IND RES
CYC 1
    US 6336949
                     B1 20020108 (200221)*
                                                      C05C009-00
ADT US 6336949 B1 US 1999-263791 19990305
PRAI IN 1999-DE324
                          19990212
    ICM C05C009-00
     ICS C05G005-00
AB
    US
          6336949 B UPAB: 20031030
     NOVELTY - A slow release nitrogenous fertilizer composition comprises a
     nitrogenous fertilizer, an inert material (0.5 - 1 \text{ w/w}) and an essential
     oil or its derivatives (0.5 - 1 \text{ w/w}).
          DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for preparing
     the composition involving:
          (a) coating the nitrogenous fertilizer with an inert material:
          (b) air drying the coated fertilizer for 24 hours;
          (c) further coating the coated fertilizer of step (b) with the
     essential oil or its derivatives; and
          (d) air drying the coated fertilizer of step (c) for 24 hours.
          ACTIVITY - None given.
          MECHANISM OF ACTION - Urease and nitrification inhibitor.
          USE - For slow release of nitrogenous fertilizer e.g. urea (claimed).
          ADVANTAGE - The composition acts as a cheap and eco-friendly
     urease/nitrification inhibitor. The components are easily decomposable.
     thus do not leave adverse influence in soil. The composition is as
     effective as dicyanodiamide as nitrification inhibitor and does not allow
     higher accumulation of NH4-N following hydrolysis of urea.
     Dwg.0/0
FS
    CPI
FA
    AB; DCN
    CPI: C04-B01C1; C10-A13C; C12-M10A; C14-T04
L13 ANSWER 5 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
    2002-129541 [17] WPIX
AN
DNC C2002-039641
    A fertilizer comprising an ammonium-producing fertilizer, benzotriazole
     and chelating agent in a specific ratio as a nitrification inhibiting
     additive is new.
DC
    GOWDA, N M N: KUMAR, S: PUTTAN, K; RAO, E V S P
    (COUL) COUNCIL SCI & IND RES
CYC 1
    US 6331198
                    B1 20011218 (200217)*
                                                      C05B007-00
ADT US 6331198 B1 US 1999-273361 19990322
PRAI IN 1999-DE232
                         19990212
   ICM C05B007-00
IC
     ICS C05C009-00
    US
         6331198 B UPAB: 20031030
    NOVELTY - A fertilizer comprises an ammonium-producing fertilizer and a
     nitrification-inhibiting additive. The additive comprises (weight%)
     benzotriazole (a) (2.5 - 50) and chelating agent (b) (1 - 50).
          ACTIVITY - Fertilizer.
         MECHANISM OF ACTION - Nitrification inhibitor.
         USE - As nitrification inhibiting additive for ammonium-producing
```

fertilizers (claimed).

ADVANTAGE - The combination of (a) and (b) provides the synergistic activity of the additive. Better inhibition of nitrification is achieved which reduces nitrogen losses and economizes nitrogen use. Benzotriazole is used in lower concentrations and shows an increased efficiency when combined with metal ion chelating compounds. The nitrification inhibitor amends nitrogen fertilizers to improve crop yields, increases fertilizer use efficiency, reduces nitrate content in food and improves quality of agriculture produce. The combination of benzotriazole and the chelating agent is a superior nitrification inhibiting additive for ammonium-producing fertilizer than either benzotriazole or chelating agent used separately.

Dwg.0/0

FS CPI

AB; DCN FA

MC CPI: C06-D08; C10-A03; C10-A13A; C10-A13C; C10-A18;

C10-A20; C10-B01B; C14-L06; C14-T03

L13 ANSWER 6 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

2001-626239 [72] WPIX

DNC C2001-186536

Fertilizer, useful as a nitrification and urease inhibitor. comprises a nitrogenous fertilizer, castor oil and oil derived from Artemisia annua.

DC

IN ANWAR, M; CHAND, S; KIRAN, U; KUMAR, S; PATRA, D D

(COUL) COUNCIL SCI & IND RES; (COUL) COUNCIL SCI & IND RES INDIANA

CYC 90

WO 2001072665 A1 20011004 (200172)* EN 22 C05G003-08 PΙ

> RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000054250 A 20011008 (200208) C05G003-08 B1 20011113 (200225)# C05G003-00 US 6315807 A 20020423 (200235) C05G003-08 BR 2000006931 CN 1354736 A 20020619 (200263) C05G003-08 C 20041214 (200501) EN C05C009-00 CA 2338454

ADT WO 2001072665 A1 WO 2000-IN32 20000328; AU 2000054250 A AU 2000-54250 20000328, WO 2000-IN32 20000328; US 6315807 B1 US 2000-536752 20000328; BR 2000006931 A BR 2000-6931 20000328. WO 2000-IN32 20000328; CN 1354736 A CN 2000-801156 20000328, WO 2000-IN32 20000328; CA 2338454 C CA 2000-2338454 20000328, WO 2000-IN32 20000328

FDT AU 2000054250 A Based on WO 2001072665; BR 2000006931 A Based on WO 2001072665: CA 2338454 C Based on WO 2001072665 20000328

20000328; US 2000-536752 PRAI WO 2000-IN32

ICM C05C009-00; C05G003-00; C05G003-08

ICS C05C003-00

WO 200172665 A UPAB: 20011206

NOVELTY - A novel fertilizer useful as a nitrification and urease inhibitor is new.

DETAILED DESCRIPTION - A novel fertilizer useful as a nitrification and urease inhibitor comprises a nitrogenous fertilizer, castor oil and oil derived from Artemisia annua. INDEPENDENT CLAIMS are included for:

(i) a method for producing the fertilizer comprising application of

```
castor oil and Artemisia annua oil to a nitrogenous fertilizer: and
          (ii) a method of using Artemisia oil as a urease and nitrification
     inhibitor comprising coating urea or other ammonium forming fertilizer
     granules with 1% castor oil and 0.5 to 5% Artemisia oil.
          USE - The fertilizer is useful as a nitrification and urease
     inhibitor.
          ADVANTAGE - The product is as effective as dicyandiamide as a
     nitrification inhibitor, has higher urease inhibitory activity, is natural
     and low persistence, doesn't allow high accumulation and consequent loss
     of ammonia and is cheaper than many synthetic inhibitors.
     Dwq.0/0
FS
    CPI
    AB; DCN
FA
    CPI: C04-B01C1; C05-C01; C10-A13C; C14-D07; C14-T01; C14-T03;
          C14-T04
L13 ANSWER 7 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
    1997-312699 [29] WPIX
DNC C1997-100764
   Process to prepare polymers of low molecular weight - comprises
     polymerisation of the monomer in the presence of an electron donor, an
     electron acceptor and a free radical quencher.
    A18 A97 E19 H07
    PANDURANGARAO, S: SURIANARAYANAN, M; VIJARAGHAVAN, K; VIJAYARAGHAVAN, R;
     RAO, S P; VIJAYARAGHAVAN, K
     (COUL) COUNCIL SCI & IND RES; (COUL) CSIR COUNCIL SCI IND
     RES
CYC 4
                                                     C08F002-06
PΙ
    EP 779299
                    A1 19970618 (199729)* EN
         R: DE FR GB
                                                     C08F002-06
     US 5998555
                    A 19991207 (200004)#
                                                     C08F002-06
                     B1 20010704 (200138) EN
     EP 779299
         R: DE FR GB
                     E 20010809 (200153)
                                                     C08F002-06
     DE 69521619
ADT EP 779299 A1 EP 1995-308998 19951211; US 5998555 A US 1995-560403
     19951117: EP 779299 B1 EP 1995-308998 19951211: DE 69521619 E DE
     1995-621619 19951211. EP 1995-308998 19951211
FDT DE 69521619 E Based on EP 779299
                         19951211: US 1995-560403
                                                        19951117
PRAI EP 1995-308998
REP 1.Jnl.Ref; FR 1561315
   ICM C08F002-06
IC
     ICS C08K005-08
    EΡ
           779299 A UPAB: 20031105
     A process for the preparation of a polymer comprises carrying out, in
     solution, polymerisation of the desired monomer or monomers in the
     presence of a complex of an electron donor and an electron acceptor which
     complex is capable of dissociating to release a free radical and a cation
     and a free radical quencher.
          USE - The polymers of low molecular weight are used as additives in
     the petroleum industry, as pour point depressants, viscosity improvers or
     antioxidants.
          ADVANTAGE - The process enhances polymer yield and gives a polymer
     having a low polydispersity index and low molecular weight.
     Dwg.0/0
    CPT
FS
   AB: DCN
FA
    CPI: A02-A03; A10-B01; A10-D; E07-D13B; E10-A06A; E10-A13B2;
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E10-H04D2: H07-G01: H07-G05: H07-G06
L13 ANSWER 8 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
   1991-185259 [25] WPIX
CR 1992-079509 [10]: 1994-248456 [30]
DNC C1991-080221
    Cyclohexyl EDTA mono anhydride - which forms radio metal chelates capable
     of surviving in vivo.
DC
    B03 B04 K08
IN MEASE, R C: SRIVASTAVA, S C
    (UYAS-N) ASSOC UNIV INC
PA
CYC 1
PI US 5021571
                    A 19910604 (199125)*
ADT US 5021571 A US 1989-372905 19890629
PRAI US 1989-372905
                         19890629
IC C07D265-30
        5021571 A UPAB: 19940921
     Cyclohexyl EDTA monoanhydride is claimed.
          ADVANTAGE - These ligands will form radiometal chelates that are
     capable of surviving in-vivo, by combining the rigidity of the ligand with
     the general utility of polyaminocarboxylates. These semi-rigid chelates
     can bind the radiometal, can be conjugated to monoclonal antibodies, and
     overcome the stability problems of prior art materials. Many of the
     complexes are more stable in serum than those formed using non-rigid
     chelates such as EDTA and DTPA.
          In an example, mixture of trans-1,2-diaminocyclohexane
     -N,N,N',N'-tetraacetic acid (4.3g), pyridine (4.0 ml) and acetic anhydride
     (9.4 ml) was stirred at room temperature for 24 hrs.. The slurry was filtered
     and washed extensively with acetic acid and then diethyl ether. The off
     white solid was collected and dried under vacuum to give trans-1.2-diamino
     cyclohexane-N.N.N', N'-tetraacetic acid monoanhydride (CDTAMA, 1.7g, 41%.
    m.pt. 235-238 deg C). Concentration of the filtrate yielded an organe sticky
     solid which was washed with cold methylene chloride to give the
     dianhydride (1.2g. 31%, m.pt. 179-183 deg.C as an off white solid, CDTAMA
     in DMSO was added to the anticolon CA17-1A antibody (20 mg/ml in 0.1N
     sodium bicarbonate) at a molar ratio of CDTAMA/antibody of 10/1. The solution
     was allowed to incubate at 4 deg C overnight. @(9pp Dwg.No.0/0)
     0/0
FS
    CPI
    AB: DCN
FA
    CPI: B05-A04; B07-D03; B07-E03; B10-A04; B10-A12C; B10-A13A;
          B10-A14: B10-A19: B10-B01B: B12-K04A1: K09-B: K09-E
L13 ANSWER 9 OF 9 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
    1986-107222 [17] WPIX
DNC C1986-045823
    Separating mixture of alpha-olefin(s) and N-paraffin(s) from coker distillate -
     or other complex cracked prod. mixed by adduction with large excess of
    urea and decomposition with e.g. water.
DC
    E17 H04
    BHATTACHAR, K K; JOSHI, G C; KULSRESTHA, G N; SAXENA, M P
    (COUL) COUNCIL OF SCIENTIFIC & IND RES
CYC 1
    DE 3436289 A 19860417 (198617)*
                                               24
PΙ
PRAI DE 1984-3436289
                         19841003
   C07C007-15; C07C009-14; C07C011-02; C07C015-02; C10G053-08; C10G067-06
```

E10-A19B; E10-B04D; E10-E02D5; E10-E02F1; E10-H04C1; E10-H04C4;

AB DE 3436289 A UPAB: 19990127

Selective separation of linear terminal olefin mixts. plus n-paraffins from petroleum distillate fractions comprises: (i) adding to cracked 6-20C distillates 4-8 pts. urea per pt. additive-forming hydrocarbons in presence of excess of activators and organic solvents: (ii) separating the adducts formed; and (iii) breaking down the adducts conventionally.

The activator (added at a concentration of 30-250 volume/weight%) may include methanol, ethanol, propanol, methyl ethyl ketone, methyl isobutyl ketone or water. The solvent may be ethylene glycol, furfural, phenol, hydrocarbons (e.g. pentane, benzene, toluene, light naphtha), chlorinated hydrocarbons (e.g. CH2Cl2) or non-adducted raffinate.

USE/ADVANTAGE - The process can be applied to naphtha, kerosene and gas oil and the like obtd. by cracking and especially coking of crude oil fractions. The olefins obtd. are useful in production of oxo alcohols, detergents, synthetic lubricants, additives, etc. The urea adduction technique is here applied for the first time to this type of feedstock, containing complex mixts, of cpds. The prod. after removal of soluble impurities, contains less than 3 weight% branched mols., less than 2 weight% diolefins and less than 1.0 weight% aromatics.

Dwg.0/0

Dwg. 0.

FS CPI

FA AB

MC CPI: E10-A13B: E10-J02C3: E10-J02D: H02-D02

=> b home

FILE 'HOME' ENTERED AT 12:37:50 ON 03 FEB 2005

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=> d his
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(FILE 'HOME' ENTERED AT 12:23:38 ON 03 FEB 2005)
     FILE 'HCAPLUS' ENTERED AT 12:24:05 ON 03 FEB 2005
                 E BHANDARI K/AU
L1
              58 E3-8
                 E SRIVASTAVA S/AU
L2
            2243 E3-22
                 E SRIVASTAVA SHIPRA/AU
L3
               1 E3
                 E NATH C/AU
L4
              67 E3-4
            8868 (COUNC? (1A) SCI? (1A) IND? (1A) RES?)/CS.PA
L5
              32 L1-4 AND ?UREA/BI
L6
              0 L6 AND ?ARYLOXY?/BI
L7
             11 L6 AND PREP+NT/RL
L8
     FILE 'WPIX' ENTERED AT 12:29:11 ON 03 FEB 2005
                E BHANDARI K/AU
                 E SRIVASTAVA S/AU
L9
              91 E3-10
                 E NATH C/AU
L10
               4 E3
           1163 (COUNC? (1A) SCI? (1A) IND? (1A) RES?)/CS,PA
L11
           25583 (B10-A13? OR C10-A13? OR E10-A13?)/MC OR (C07C273 OR C07C275)/I
L12
              9 L9-11 AND L12
L13
     FILE 'REGISTRY' ENTERED AT 12:37:10 ON 03 FEB 2005
     FILE 'HCAPLUS' ENTERED AT 12:37:15 ON 03 FEB 2005
L14
                TRA L8 1- RN :
                                    245 TERMS
     FILE 'REGISTRY' ENTERED AT 12:37:16 ON 03 FEB 2005
L15
            245 SEA L14
L16
                STR
              0 L16
. 117
              26 L16 FULL
L18
                 SEL RN 3-18 22
             17 E1-17 AND L18
L19
     FILE 'HCAPLUS' ENTERED AT 13:13:51 ON 03 FEB 2005
L20
              2 L19
               0 L20 AND L1-5
L21
     FILE 'HCAOLD' ENTERED AT 13:14:39 ON 03 FEB 2005
L22
              0 L19
=> b req
FILE 'REGISTRY' ENTERED AT 13:16:08 ON 03 FEB 2005
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```

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

VAR G1=O/S NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC 15 3 NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

L18 26 SEA FILE=REGISTRY SSS FUL L16

L19 17 SEA FILE=REGISTRY ABB=ON PLU=ON (245483-91-4/BI OR 335022-01-0/BI OR 335022-03-2/BI OR 335022-07-6/BI OR 335022-09-8/BI OR

0/BI OR 335022-03-2/BI OR 335022-07-6/BI OR 335022-09-8/BI OR 335022-11-2/BI OR 335022-13-4/BI OR 335022-15-6/BI OR 335022-19-0/BI OR 335022-25-8/BI OR 335022-27-0/BI OR 335022-31-6/BI OR 335022-33-8/BI OR 335022-35-0/BI OR 335022-37-2/BI OR 335022-39

-4/BI OR 335022-43-0/BI) AND L18

=> b hcap

FILE 'HCAPLUS' ENTERED AT 13:16:16 ON 03 FEB 2005

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Page 3

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FILE COVERS 1907 - 3 Feb 2005 VOL 142 ISS 6 FILE LAST UPDATED: 2 Feb 2005 (20050202/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr 120 tot

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L20 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN AN 2001:97882 HCAPLUS
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DN 134:316232

ED Entered STN: 09 Feb 2001

- TI Liquid chromatographic enantioseparation of .beta.-blocking agents with (1R.2R)-1,3-diacetoxy-1-(4-nitrophenyl)-2-propyl isothiocyanate as chiral derivatizing agent
- AU Peter. M.; Gyeresi, A.; Fulop, F.
- CS Institute of Pharmaceutical Chemistry, University of Szeged, Szeged, H-6720, Hung.
- SO Journal of Chromatography, A (2001), 910(2), 247-253 CODEN: JCRAEY: ISSN: 0021-9673
- PB Elsevier Science B.V.
- DT Journal
- LA English
- CC 64-3 (Pharmaceutical Analysis)
- The applicability of (1R.2R)-1.3-diacetoxy-1-(4-nitrophenyl)-2-Pr isothiocyanate [(R.R)-DANI] as a recently developed chiral derivatizing agent for the enantiosepn. of a series of .beta.-blockers is described. The thiourea diastereomers formed were analyzed by reversed-phase high-performance liquid chromatog., mixts. of water and methanol or acetonitrile being used for elution. Conditions of derivatization (temperature, reagent excess and reaction time) were optimized, and the effects of organic modifiers on the retention and separation were investigated; the diastereomers could readily be baseline separated with methanol-containing mobile phases with resolns. between 1.58 and 2.72.
- ST beta blocker resoln HPLC chiral agent; isothiocyanate chiral agent sepn adrenoceptor antagonist
- IT Reversed phase HPLC

(enantiosepn. of .beta.-blockers by reversed phase HPLC using (R.R)-DANI as chiral derivatizing agent)

IT Adrenoceptor antagonists

(.beta.-: enantiosepn. of .beta.-blockers by reversed phase HPLC using (R,R)-DANI as chiral derivatizing agent)

IT 525-66-6 3930-20-9 6452-71-7 13523-86-9 13655-52-2 29122-68-7 36894-69-6 37517-30-9 51384-51-1 63659-18-7 66515-26-2

36894-69-6 37517-30-9 51384-51-1 63659-18-7 335021-83-5 335021-99-3 **335022-01-0 335022-03-2**

335022-05-4 335022-07-6 335022-09-8

335022-11-2 335022-13-4 335022-15-6

335022-17-8 **335022-19-0** 335022-21-4 335022-23-6

335022-25-8 335022-27-0 335022-29-2

335022-31-6 335022-33-8 335022-35-0

335022-37-2 335022-39-4 335022-41-8

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335022-43-0
                  335022-45-2
                                 335022-48-5
                                               335022-50-9
    RL: ANT (Analyte): ANST (Analytical study)
        (enantiosepn. of .beta.-blockers by reversed phase HPLC using
        (R.R)-DANI as chiral derivatizing agent)
IT 250265-34-0
    RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
        (enantiosepn. of .beta.-blockers by reversed phase HPLC using
        (R.R)-DANI as chiral derivatizing agent)
             THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 40
(1) Aboul-Enein. H: Enantiomer 1999, V4, P451 HCAPLUS
(2) Aboul-Enein, H: J Liq Chromatogr Rel Technol 1998, V21, P1817 HCAPLUS
(3) Anon: A Practical Guide to Chiral Separations by Liquid Chromatography 1994
(4) Anon: Handbook of Derivatization Reactions for HPLC 1998
(5) Anon: The Impact of Stereochemistry on Drug Development and Use 1997
(6) Armstrong, D; J Liq Chromatogr Rel Technol 1992, V15, P545 HCAPLUS
(7) Bazylak, G; J Liq Chromatogr Rel Technol 1999, V22, P1171 HCAPLUS
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RL: ANT (Analyte); ANST (Analytical study)

RE

(enantiosepn. of .beta.-blockers by reversed phase HPLC using (R.R)-DANI as chiral derivatizing agent)

RN 335022-01-0 HCAPLUS

CN Benzeneacetamide. 4-[(2R)-3-[[[[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]amino]thioxomethyl](1methylethyl)amino]-2-hydroxypropoxy]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-03-2 HCAPLUS

CN Butanamide, N-[3-acety]-4-[(2R)-3-[[[[(1R.2R)-2-(acety]oxy)-1-[(acety]oxy)methy]]-2-(4-nitropheny])ethy]]amino]thioxomethy][(1-methy]ethy])amino]-2-hydroxypropoxy]pheny]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-07-6 HCAPLUS

CN Thiourea, N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2R)-2-hydroxy-3-[4-(2-methoxyethyl)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-09-8 HCAPLUS

CN Thiourea. N'-[(1R.2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2R)-2-hydroxy-3-[4-(3-oxobutyl)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

RN 335022-11-2 HCAPLUS

CN Thiourea. N'-[(1R.2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2R)-2-hydroxy-3-[2-(2-propenyloxy)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-13-4 HCAPLUS

CN Thiourea. N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2R)-3-[4-[[2-(1-ethylpropoxy)ethoxy]methyl]phenoxy]-2-hydroxypropyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

RN 335022-15-6 HCAPLUS

CN Thiourea. N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2R)-3-[4-[2-(cyclopropylmethoxy)ethyl]phenoxy]-2-hydroxypropyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

-1002

RN 335022-19-0 HCAPLUS

CN Thiourea, N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2R)-2-hydroxy-3-[2-(2-propenyl)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-25-8 HCAPLUS

CN Benzeneacetamide, 4-[(2S)-3-[[[[(1R.2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]amino]thioxomethyl](1methylethyl)amino]-2-hydroxypropoxy]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-27-0 HCAPLUS

CN Butanamide, N-[3-acety]-4-[(2S)-3-[[[[(1R.2R)-2-(acety]oxy)-1-[(acety]oxy)methy]]-2-(4-nitropheny])ethyl]amino]thioxomethyl](1methylethyl)amino]-2-hydroxypropoxy]phenyl]- (9CI) (CA INDEX NAME)

RN 335022-31-6 HCAPLUS

CN Thiourea, N'-[(1R.2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2S)-2-hydroxy-3-[4-(2-methoxyethyl)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-33-8 HCAPLUS

CN Thiourea. N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2S)-2-hydroxy-3-[4-(3-oxobutyl)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-35-0 HCAPLUS

CN Thiourea. N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2S)-2-hydroxy-3-[2-(2-propenyloxy)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 335022-37-2 HCAPLUS

CN Thiourea. N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2S)-3-[4-[[2-(1-ethylpropoxy)ethoxy]methyl]phenoxy]-

2-hydroxypropyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

RN 335022-39-4 HCAPLUS

CN Thiourea, N'-[(1R,2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2S)-3-[4-[2-(cyclopropylmethoxy)ethyl]phenoxy]-2-hydroxypropyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

-N02

RN 335022-43-0 HCAPLUS

CN Thiourea. N'-[(1R.2R)-2-(acetyloxy)-1-[(acetyloxy)methyl]-2-(4-nitrophenyl)ethyl]-N-[(2S)-2-hydroxy-3-[2-(2-propenyl)phenoxy]propyl]-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

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    Entered STN: 08 Oct 1999
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    Preparation of N-(mercaptoalkyl)urea derivatives of amino acids as
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     inhibitors of TNF-.alpha. production
    Mita. Shiro; Horiuchi, Masato; Ban, Masakazu; Suhara, Hiroshi
IN
    Santen Pharmaceutical Co., Ltd., Japan
    PCT Int. Appl., 324 pp.
    CODEN: PIXXD2
DT
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    Japanese
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Prepared are .alpha.-[N'-(mercaptoalkyl)ureido]alkanamide compds. having a urea structure as the basic structure and carrying sulfur and amide bonds in side chains. The above compds. are represented by general formula R1S-A1(R7)-NR2CONR3-A2(R4)CONR5R6 [wherein R1 represents H. (un)substituted lower alkyl or aromatic group, RA-CO-, RC-S- or a group of formula S-A1(R7)-NR2CONR3-A2(R4)CONR5R6; R2. R3 and R4 represent each H. (un)substituted lower alkyl or alkenyl, cycloalkyl, cycloalkenyl or (un)substituted aromatic group; R5 and R6 represent each H. (un)substituted lower alkyl or alkenyl, cycloalkyl, cycloalkenyl or (un)substituted aromatic group, or R5 and R6 may form together (un)substituted nonarom. heterocycle: R7 represents H. (un)substituted lower alkyl. cycloalkyl. hydroxy, mercapto, Ph. RB-O-, RC-S-, RD-COS-, RE-OCO-, RF-N(RG)- or -CONHOH; A1 and A2 represent each an alkylene; RA represents lower (halo)alkyl, aromatic group, lower alkoxy, aromatic-lower alkoxy, RF, or NRG; RB represents lower alkyl or aromatic group; RC represents H. lower alkyl, aromatic group; RD represents lower alkyl or aromatic group; RE represents H. lower alkyl, or aromatic group, RF and RG represent H, lower alkyl, cycloalkyl, or aromatic group]. It has been found out that these compds. have pharmacol. effects, in particular, a tumor necrosis factor-.alpha. (TNF-.alpha.) production inhibitory effect. They are useful as remedies for autoimmune diseases and as antirheumatics. Thus, (2S)-2-[3-[2-(acetylthio)ethyl]-3-(2-cyclohexylethyl)ureido]propionic acid (preparation given) was condensed with N-methylpiperazine using 1-hydroxybenzotriazole, 1-ethyl-3-(3dimethylaminopropyl)carbodiimide hydrochloride, and N-methylmorpholine in CH2C12 at room temperature overnight to give the title compound (I; X = NMe) in 78% yield. I (X = NMe) and I (X = 0) at 50 mg/kg p.o. inhibited the Salmonella lipopolysaccharide-induced production of TNF-.alpha. in rats by 84.6 and 93.5%, resp.

ST mercaptoalkylurea amino acid deriv prepn antirheumatic: autoimmune disease treatment mercaptoalkylureidoalkanamide: TNF prodn inhibitor mercaptoalkylureidoalkanamide

IT Antirheumatic agents

Autoimmune disease

(preparation of N-(mercaptoalkyl)urea derivs. of amino acids as inhibitors of TNF-.alpha. production, antirheumatics, and remedies for autoimmune disease) $\frac{1}{2}$

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Tumor necrosis factors
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     (Miscellaneous); BIOL (Biological study); PROC (Process)
        (preparation of N-(mercaptoalkyl)urea derivs. of amino acids as inhibitors
        of TNF-.alpha. production, antirheumatics, and remedies for autoimmune
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        (preparation of N-(mercaptoalkyl)urea derivs. of amino acids as inhibitors
       of TNF-.alpha. production, antirheumatics, and remedies for autoimmune
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disease)
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    Diisopropylamine 108-24-7, Acetic anhydride 108-95-2, Phenol.
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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
   (preparation of N-(mercaptoalkyl)urea derivs. of amino acids as inhibitors
   of TNF-.alpha. production, antirheumatics, and remedies for autoimmune
   disease)
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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
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   (preparation of N-(mercaptoalkyl)urea derivs. of amino acids as inhibitors
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of TNF-.alpha. production, antirheumatics, and remedies for autoimmune

disease) THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 15

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- 245483-91-4P

RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent)

(preparation of N-(mercaptoalkyl)urea derivs. of amino acids as inhibitors of TNF-.alpha, production, antirheumatics, and remedies for autoimmune disease)

245483-91-4 HCAPLUS RN

Benzenepropanamide. .alpha.-[[[[1-(hydroxymethyl)-2-phenoxyethyl](3methy[buty])amino]carbonyl]amino]-N,N-dimethyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

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